

Appendix H
Identification of Mitigation Action by New or Existing

**Identification of Mitigation Actions By Their affect on New or Existing Structures,
Infrastructure or Critical Facilities**

	High Priority Actions
All Hazards	<ul style="list-style-type: none"> Public education/communication new and existing Mitigation table-top exercise new and existing Establish County natural hazard mitigation emergency response team Existing Establish health department emergency response assessment team Existing Establish system of cooling/warming centers Existing Establish an emergency response assessment team Existing Describe vulnerability in terms of the types and numbers of future buildings, infrastructure, and critical facilities located in the identified hazard areas New
Coastal Erosion Existing	<ul style="list-style-type: none"> Provide preventative maintenance of dams/coast Existing Identify coastal erosion/landslide issues in Antioch Evaluate Stabilization and land use techniques to minimize coastal erosion and update codes and ordinances new and existing Estimate possible losses to structures, contents and function losses, critical facilities and infrastructure from coastal erosion Existing
Dam Failure	<ul style="list-style-type: none"> Evaluate existing dams for stability Existing Obtain Dam Break analysis's from the Illinois Department of Natural Resources and identify at risk structures Existing Assess potential flood control upgrades new and existing Regularly inspect dams Existing
Extreme Heat	<ul style="list-style-type: none"> Identify susceptible population, communicate/educate susceptible population of alternative shelter with available technology (web, rev. 911, CATV, message boards) Existing Increase public awareness Existing
Flood	<ul style="list-style-type: none"> Remove high risk structures from floodplain or protect HRS Existing Mitigate all repetitive loss structures identified by FEMA. Existing Improve capacity of drainage systems new and existing Acquire properties in flood-prone areas Existing Implement maintenance programs for drainage systems new and existing Maintain compliance with NFIP new and existing Reduce I/I and sewer backups Existing See the table below for a list of Actions provided by the Lake County Flood Hazard Mitigation Plan. Existing
Hail	<ul style="list-style-type: none"> Educate residents on Maintain/EUF building codes new and existing
High Wind	<ul style="list-style-type: none"> Educate residents on Maintain/EUF building codes new and existing Plan for tree trimming Existing
Landslide	<ul style="list-style-type: none"> Provide preventative maintenance of dams/coast Existing Identify coastal erosion/landslide issues in Antioch new and existing Estimate possible losses to structures, contents and function losses, critical facilities and infrastructure from landslides new and existing
Severe Thunderstorm	<ul style="list-style-type: none"> Provide preventative maintenance for susceptible landslide areas Existing Install/maintain lightning detection systems for population/active sites Existing Maintain/EUF codes that mandate safe structures (electrical codes) Existing

	High Priority Actions
Severe Winter Storm	<ul style="list-style-type: none"> • Install/maintain lightning detection systems for population/active sites Existing • Maintain/EUF codes that mandate safe structures (electrical codes) Existing • Maintain/snow removal plans new and existing • Educate residents on snow Removal plans (prioritize) new and existing
Tornado	<ul style="list-style-type: none"> • Information material that identifies safety shelters Existing • Provide alternative power sources at critical structures and shelters Existing • Coordinate line clearance program (power lines vs. trees) Existing • Encourage underground utilities for new constructions New • Maintain EE training Existing • Maintain/update ESDA Plans that determine responsibilities Existing
Wildfire	<ul style="list-style-type: none"> • Environmental groups controlled burns new and existing • Public awareness new and existing

Flood Actions Provided by the Lake County Flood Hazard Mitigation Plan

No.	Actions
<i>Flood Damage Remediation</i>	
1	Establish a county mitigation task force composed of representatives from the primary county agencies and municipalities involved in flood mitigation for purposes of setting priorities for use of state, federal and county flood mitigation funds. new and existing
2	Establish guidelines for determining what mitigation measures are appropriate under various circumstances. new and existing
3	Identify all structures located in flood hazard areas and set up a database for county and municipal use to contact property owners regarding their flood risk and mitigation options. Existing
4	Collect lowest entry elevations and conduct flood audits for high priority flood problem areas to determine the measure(s) (acquisition, relocation, building elevation, floodproofing or other) that are most practical and cost effective in the long-term. Existing
5	Inventory and prioritize buildings located in flood hazard areas that qualify for acquisition or relocation. Existing
6	Coordinate relocation/acquisition programs with other local and county-wide land acquisition programs including FPD, CDBG program, park districts and public works. Existing
7	Develop, adopt and implement protocol for countywide drainage system maintenance standards. new and existing
8	Focus on improving septic system performance in public information efforts targeted to property owners in flood problem areas that experience septic failure. Existing
9	Develop action plan to identify and remedy illicit hookups and sewer infiltration that includes maps and prioritizes problem areas for remediation. Existing
10	Provide technical assistance at county level to municipalities and property owners for sewer backup mitigation. Existing

- 11 Establish (or re-designate an existing) "high profile" flood proofing specialist position at the county level to advise and train county and municipal staff on recommending appropriate floodproofing measures and conducting flood audits. **Existing**
- 12 Provide incentive-based flood mitigation training program for appropriate county and municipal staff. **Existing**
- 13 Develop local floodproofing incentives program for property owners. **Existing**
- 14 Locate areas by subwatershed appropriate for regional detention sites. **New**
- 15 Establish county standards for design and construction of regional detention facilities that meet multi-objective criteria. **New**
- 16 Develop a county system for coordinating and funding regional structural flood control projects. **new and existing**
- 17 Provide a pool of county and community local cost-share funds (based on planning jurisdiction) to match state and federal dollars for mitigation. **Existing**

Flood Damage Prevention

- 18 Map natural drainage system on watershed-based countywide conservation and development map that is incorporated into the WDO. **new and existing**
- 19 Adopt separate zoning classification in UDO for floodplains, wetlands, and drainage ways. **new and existing**
- 20 Develop countywide open space network map (that emphasizes protection of the natural drainage system) for adoption by municipalities and county. **new and existing**
- 21 Incorporate open space network map into county, municipal and township land acquisition programs/plans. **new and existing**
- 22 Determine existing runoff rates and volume for each sub watershed to determine watershed-based allowable release rates. **new and existing**
- 23 Complete comprehensive watershed plans that include multi-objective floodplain management for flood damage reduction for entire county. **new and existing**
- 24 All storm sewer improvements that result in increased drainage capacity should be reviewed on a watershed basis to address cumulative impacts. **Existing**
- 25 Aggregate all 1 or 2 ft topography and stream cross sections available from county, municipal, state & federal agencies. **new and existing**
- 26 Acquire missing topographic and cross section information for the county. **new and existing**
- 27 Update out-of-date flood studies for county watersheds. **new and existing**
- 28 Complete accurate floodplains map (including 1st order streams and significant depressional areas) and submit to FEMA for adoption. **new and existing**
- 29 Establish schedule and funding mechanism to keep flood studies and mapping up-to-date. **new and existing**

- 30 Develop system to tag addresses for floodplain, floodway or flood problem areas properties for review and permitting. **new and existing**
- 31 Strengthen implementation of runoff volume reduction hierarchy in the WDO by providing density incentives through UDO and comparable municipal ordinances. **new and existing**
- 32 Adapt county and municipal landscape requirements to encourage landscaping with deep-rooted native vegetation. **new and existing**
- 33 Establish minimum requirements for topsoil replacement to improve infiltration on developed sites. **new and existing**
- 34 Improve timing and performance for soil erosion and sediment control practices at the county and community level. **new and existing**
- 35 Adopt amended wetland regulatory provisions of the Watershed Development Ordinance to match Corps General Permit requirements and includes a goal of no net loss of wetlands. **new and existing**
- 36 Require mitigation or fee-in-lieu of mitigation for all wetland impacts associated with development. **new and existing**
- 37 Increase wetland and stream buffer widths in WDO and require use and deed restrictions on wetlands and buffer areas (develop a map set for all deed restricted areas). **new and existing**
- 38 Establish county program to restore wetlands. **new and existing**
- 39 Adopt countywide best management practice standards for maintenance of channelized rivers and streams. **new and existing**
- 40 Increase outreach to community plan departments and commissions to strengthen local understanding and review of development proposals and their compliance with WDO and wetland regulatory standards. **New**
- 41 Develop continuing training requirements for community WDO enforcement officers and engineers to improve consistency in application and review of WDO standards. **new and existing**
- 42 Coordinate /incorporate SMC review of development proposals early in the process to insure appropriate runoff reduction BMPs are incorporated into development designs. **New**
- 43 Incorporate monitoring and evaluation of BMP effectiveness in WDO permits. **new and existing**
- 44 Create Special Service Areas so Townships can collect utility fees to maintain detention ponds and other components of the drainage system in unincorporated areas. **new and existing**

Emergency Response

- 45 Improve accessibility of rain and stream gage information and provide training to increase municipal and county use of information. **new and existing**
- 46 Set up local automated fax notice warning system that includes all municipalities, townships, county agencies and critical facilities at flood risk. **Existing**
- 47 Incorporate proactive response activities in emergency plans. Examples include: checking sites of known drainage constrictions, monitoring lake levels, and providing guidance to property owners on when and how to turn off utilities. **new and existing**
- 48 Install alarm systems on lift stations. **Existing**

- 49 Map all critical transportation routes subject to flooding and planned detours. *Existing*
- 50 Identify and map all critical facilities located in flood prone areas. *Existing*
- 51 Identify and map all hazardous storage sites located in flood prone areas. *Existing*
- 52 Standardize and improve system of flood damage reporting by the county, townships and municipalities in a computerized database format. *Existing*
- 53 Add a "Flood Annex" to the *Lake County Emergency Operations & Preparedness Plan*.
Existing

Public Outreach

- 54 Build a countywide partnership for coordinated delivery of public information materials and flood mitigation programs that target communities and property owners at risk. *Existing*
- 55 Expand "Flood Awareness Week" with more activities for the general public. *Existing*
- 56 Build a flood mitigation display on property protection measures for partnership to use at home shows and the county fair. *Existing*
- 57 Plan and conduct an open house on property protection measures. *Existing*
- 58 Conduct training programs for lake and homeowner associations in flood response. *Existing*
- 59 Educate and provide information and maps on flood hazard areas and wetlands to realtors and appraisers to improve real estate disclosure. *new and existing*
- 60 Tie flood hazard areas into township tax files for disclosure purposes. *new and existing*